

**REMARKS**

Claims 16-20 are all the claims pending in the application. Claim 20 is being amended.

**I. Statement of Substance of Interview**

The Applicant thanks the Examiner for the telephonic interview conducted on April 14, 2009. During the interview, the Applicant's Representative and the Examiner discussed the rejections under 35 U.S.C. § 112, first paragraph, and agreed that amending claim 20 to clarify that the computer system is configured to support multiple parallel threads of execution will eliminate this rejection.

The Applicant's Representative also discussed the statutory subject matter rejections under 35 U.S.C. § 101, including various sections of the Federal Circuit's opinion in *In re Bilski* indicating that the transformation of raw data into a particular visual depiction of a physical object on a display is sufficient to render that more narrowly-claimed process patent-eligible. Since claim 20 is directed to transforming this type of raw data into a visual depiction of activity in a patient, the Applicant's Representative believes the pending claims fall into the category of statutory subject matter.

Finally, the Applicant's Representative discussed the rejections under 35 U.S.C. § 102 based on the Valdes-Sosa reference (US 7,092,748). The Applicant's Representative pointed out that Valdes-Sosa does not describe using a feedback loop or using multiple parallel threads of execution. The Examiner asked that the description of this feedback loop be further clarified in the pending claims, and the Applicant's Representative agreed to propose an appropriate

amendment. The Applicant's Representative agreed to file an RCE to continue prosecution in view of the amendments being made to the claims.

## **II. Claim Rejections Under 35 U.S.C. § 112**

The Examiner rejected claims 16-20 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner specifically pointed out that Claim 20 describes "said circuit being configured to support multiple parallel threads of execution, whereas the Specification describes that "the computer system 16 is configured to support multiple threads of execution."

The Applicant herein amends claim 20 to clarify where "said circuit including a computer system with a processor and a memory, the computer system being configured to support multiple parallel threads of execution with one thread being a measurement module and a second thread being a source reconstruction module." The Applicant submits that the amendment resolves the rejection of claims 16-20 under 35 U.S.C. § 112, first paragraph, and respectfully requests that this rejection be withdrawn.

## **III. Claim Rejections Under 35 U.S.C. § 101**

The Examiner rejected claims 16-20 under 35 U.S.C. § 101, stating that in order for a method to be considered a "process" under § 101, a claimed process must either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter

(such as an article or materials). The Examiner then stated that the claim language does not include the required tie or transformation.

The Applicant respectfully disagrees, and submits that the subject matter of claims 16-20 falls clearly within the description of statutory subject matter described by the court in *In re Bilski*, where “the transformation of raw data into a particular visual depiction of a physical object on a display was sufficient to render that more narrowly-claimed process patent-eligible.” *In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008). The subject matter of claim 20 covers a process of acquiring a signal, performing a source reconstruction on the signal along with other steps to modify the signal, which results in source reconstruction data that is then displayed on a visual display of anatomical data to represent the location of physical activity occurring inside of a patient.

The court further notes that data is patent eligible if is “clearly represented physical and tangible objects, namely the structure of bones, organs and other body tissues.” *Id.* Thus, the source reconstruction data is representative of a physical and tangible object--that of physical activity in a patient. This raw source reconstruction data is transformed into a particular visual depiction of a physical object on a display, and is therefore patentable subject matter.

The *Bilski* court finally notes that “the electronic transformation of the data itself into a visual depiction in *Abele* was sufficient; the claim was not required to involve any transformation of the underlying physical object that the data represented.” *Id.*, discussing *In re Abele*, 684 F.2d 902 (CCPA 1982).

Thus, the court in *In re Bilski* indicates that data such as the source reconstruction data that is displayed on a visual display, as recited in claim 20, is patent eligible subject matter under 35 U.S.C. § 101. The Applicant therefore requests that the rejection of claims 16-20 under 35 U.S.C. § 101 be withdrawn.

#### **IV. Claim Rejections Under 35 U.S.C. § 102**

The Examiner rejected claims 16-20 under 35 U.S.C. § 102(e) as being anticipated by Valdes Sosa, et al. (US 7,092,748). The Examiner indicated that Valdes Sosa discloses a circuit configured to support multiple threads of execution, and using the source reconstruction modifies the acquisition of a new electromagnetic physiological signal.

The Applicant herein amends claim 20 to further clarify that the claimed method includes the step of “feeding the source reconstruction data through a feedback loop to the measurement module to modify the analysis of a new electromagnetic physiological signal.” The amendment is supported in Fig. 1 and p. 7 of the Specification, describing the feedback loop 30.

Valdes Sosa fails to disclose any type of feedback loop similar to that described in claim 20. The Examiner cites to Valdes Sosa at Fig. 8 and col. 33, line 12 - col. 34, line 3, which only describes the measurement of a signal, but does not disclose the use of a feedback loop where the source reconstruction data is fed back into the measurement module so that the analysis of a new electromagnetic physiological signal can be modified, as specified in claim 20. Instead, Valdes Sosa only describes the simple measurement of a signal and known processing steps that occur after the signal is acquired.

Valdes Sosa also fails to describe a computer system configured to support multiple parallel threads of execution, where one thread is a measurement module and a second thread is a source reconstruction module. The Examiner cites to col. 13, line 65 - col. 14, line 67 and col. 15, lines 1-5, as reciting a computer capable of supporting multiple threads of execution. However, the cited section, as well as the remainder of the Valdes Sosa description, fails to discuss any system or computer configured to support multiple threads of execution. Valdes Sosa merely describes a "general purpose digital computer that serves as a control unit." *Valdes Sosa*, col. 14, lines 18-19. There is no discussion in Valdes Sosa of a computer system that can support multiple threads of execution, as stated in claim 20.

For at least the reasons stated above, the Applicant submits that claims 16-20 are allowable over Valdes Sosa, as Valdes Sosa fails to describe each and every element of claim 20, as required for a rejection under 35 U.S.C. § 102(e). The Applicant respectfully requests that the rejection of claims 16-20 be withdrawn.

## **V. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)  
U.S. Application No.: 10/765,320

Attorney Docket No.: CQ10441

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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